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WHEN CHILDREN OF IMMIGRANTS COME OF AGE: A LONGITUDINAL PERSPECTIVE ON LABOUR MARKET OUTCOMES IN SWITZERLAND

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When children of immigrants come of age. A longitudinal perspective on labour market outcomes in Switzerland

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Abstract

Migration during childhood has a negative impact on educational outcomes. As a result, migrant youths enter the labour market with lower educational assets and experience obstacles and delayed transitions. Even so, little is known about later labour-market outcomes of youth who migrated to Switzerland during childhood and attended post-compulsory education there. Are there differences with respect to the labour-market outcomes for these young adults, and do these differences persist once we account for educational attainment and other relevant characteristics? For a longitudinal analysis of these research questions, we draw on panel data of the first TREE (TRansitions from Edu-cation to Employment) cohort. With reference to descriptives of their educational and labour market situation, we propose a number of explanatory models to predict the effect of migration characteristics while controlling for relevant characteristics including educational attainment. We consider the effect of three variables related to migration: respondents' country of birth, respondents' nationality and parental country of birth. Our results show that, in a longitudinal perspective, those who migrated during childhood experience higher risk of unemployment, are to be found in lower occupational positions and have lower incomes than native youths. While some differences can be explained by the lower level of education of those born abroad, this is not the case for other differences such as income differentials. Moreover, some effects vary by type of migration characteristics (respondent's country of birth, parental country of birth and respondent's nationality) or appear only in a longitudinal perspective, thereby underlining the necessity of framing migration multi-dimensionally and relying on panel data.

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I Introduction

In general, migrating during childhood has a negative impact on educational outcomes (OECD, 2010, 2016, 2018b). This is even more pronounced in countries where early educational tracking limits upper-secondary educational opportunities. Segregated educational systems such as Switzerland's do not allow enough time to close the gap for those who arrive during their time of education, frequently forcing them to settle for less demanding training (Crul, Schnell, et al., 2012; Felouzis, Charmillot, & Fouquet-Chauprade, 2016; Hupka & Stalder, 2011; Spörlein, 2018). As a result, those who migrated during childhood enter the labour market with lower educational assets. The strong link between human capital acquired during education and labour-market outcomes has been highlighted repeatedly since Becker's seminal work (Becker, 1964), and in Switzerland, much like in many other countries, this human capital differs according to migration origin and migration status (Fibbi, Lerch, & Wanner, 2011; Gomensoro & Bolzman, 2016; Meyer, 2003; SKBF, 2014). Differences in human capital by country of origin and migration status contribute to unequal labour-market outcomes at the beginning of occupational careers in terms of, for instance, higher unemployment rates (Fibbi, Lerch, & Wanner, 2006, 2007; Guarin & Rousseaux, 2017; Heath & Cheung, 2007a), lower occupational status and lower income (Bolzman, Fibbi, & Vial, 2003; Crul, Schneider, & Lelie, 2012; Ebner & Helbling, 2016; Heath, Rothon, & Kilpi, 2008). Some studies have shown that differences in wages between migrants and natives in Western countries can largely be explained by human capital (see, for instance, de Coulon, 2001; Heath & Cheung, 2007a). Even so, other characteristics also produce different outcomes for individuals as they are entering the labour market and thereafter. Among them are demographic characteristics (e.g., age, gender, parenthood); economic, social or legal capital; or structural labour-market characteristics, such as varying job opportunities depending on where people live (Kogan, 2006; Sacchi, Kriesi, & Buchmann, 2016). In addition, specific groups of foreign origin may experience discrimination in the labour market (Bolzman, 2011; Ebner & Helbling, 2016; Fibbi et al., 2006; Guarin & Rousseaux, 2017; Heath & Cheung, 2007a, Zschirnt & Fibbi, 2019) and/or so-called "ethnic penalties".

The bottom line of many studies is that the transition from education to employment is generally more laborious, complex and less fluid for migrant descendants (whether they migrated during childhood or were born in the country of residence) than for young adults without foreign roots. However, the available literature has some limitations. It mostly (a) focuses on the labour market entry of migrant descendants on the basis of a relatively short observation span, (b) compares labour-market outcomes of native-born Swiss with those who migrated after age 18 and (c) adopts unidimensional and cross-sectional approaches. In contrast to this body of literature, our contribution draws on longitudinal data to assess the mid- to long-term development of labour-market careers. More specifically, what we are interested in is the labour-market outcomes around age 30 of those who migrated during childhood and attended post-compulsory education in Switzerland. We ask whether the inequalities in such outcomes at age 30 are long-lasting effects of having migrated during childhood (*ceteris paribus*) or whether such inequalities are the outcomes into which prior differences (such as educational outcomes, social origin and so on) eventually "translate"? In this article, labour-market outcomes are

considered to be multidimensional; that is to say, they involve a variety of aspects such as activity status, unemployment, occupational status, intergenerational occupational mobility and income.

We draw on the data of the first TREE (TRansitions from Education to Employment) cohort, a longitudinal follow-up of a sample of Swiss school-leavers who participated in PISA 2000 (Gomensoro & Meyer, 2017). Switzerland offers an ideal case study for those questions. A significant proportion of the permanent resident population is of immigrant origin, which has resulted from a succession of immigration waves involving people from a wide social spectrum (from low-skilled “guest workers” to highly skilled “expatriates”) and a variety of countries (both European and non-European). In this paper, we first introduce the educational and labour-market research on which we base our analyses and the research issues that we address (section 2). We continue with a description of educational, labour-market and migration contexts in Switzerland (section 3) and of data and methods (section 4). With regard to our findings (section 5), we first outline educational outcomes at age 30 (section 5.1), as they are a crucial prerequisite for labour-market integration and outcomes in later life. Second, we describe the respondents’ situation in the labour market at age 30 (section 5.2), their occupational position and intergenerational mobility (part 5.3) and their income (section 5.4). In various sections, we rely on multivariate predictive models to control for education and other relevant characteristics. In addition to relevant covariates, we consider further migration characteristics such as parental country of origin and nationality of youths to isolate the effect of having migrated during childhood.

2 Background and research issues

The upper-secondary completion rate in Switzerland has been hovering around 90% for a long time, resulting in Switzerland ranking among the top ten OECD countries but persistently falling short of the 95% mark, which the political authorities had defined as a benchmark to be reached by 2015 (EDK, 2006, 2011, 2015). In fact, having an upper-secondary certificate is a prerequisite to access tertiary education or to sustainable integration in the labour market. Having no upper-secondary certificate strongly imperils sustainable labour-market integration: it increases the odds of failing to find gainful employment, experiencing sustained periods of precarious employment and unemployment and having to rely on welfare assistance during one’s working life. Moreover, the risks of exclusion associated with the absence of a post-compulsory certificate are not limited to the labour market. Educational attainment has also clearly been shown to be closely related to political and cultural participation, health, social integration and deviance (Bacher, Hirtenlehner, & Kupfer, 2010; Fend, Berger, & Grob, 2009; Meyer, 2018; SKBF, 2014).

During the past few decades, numerous measures have been taken to increase the upper-secondary certification rate. In 2002, the law on vocational education and training established a new two-year vocational education and training (VET) programme for low-achieving students (EDK, 2011), thus contributing to the expansion of available training places. In addition, many efforts have been undertaken to improve equal opportunities in the transition from compulsory to upper-secondary school, to reshape and improve the effectiveness of transitional solutions, harmonise entry requirements to VET and raise the annual amount of available VET positions as well as to develop long-term

partnership strategies between the Confederation, cantons and labour-market organisations, to develop case management and so forth (EDK, 2011, 2015).

Recent analyses based on longitudinal register data (BFS, 2018a) show that, compared to Swiss nationals born in Switzerland (94%), the upper-secondary completion rate is markedly lower for both foreign nationals born in Switzerland (86%) and those born abroad (73%). With respect to baccalaureate certification at age 25 (granting access to tertiary-level education), nationality seems to matter more than place of birth. Around 40% of Swiss nationals attain a vocational, specialised or general baccalaureate compared to only 23% among foreign nationals. Given those differences, the Swiss Conference of Cantonal Ministers of Education (EDK) declared that Switzerland still has a long way to go when it comes to increasing post-compulsory completion rates among young migrants and has encouraged policy-makers to undertake cantonal and inter-institutional measures accordingly (SKBF, 2014).

Later in life, unequal educational outcomes between those who have passed through the Swiss school system from beginning to end (natives) and those who have not (migrants) are one of the main explanations for differences in labour-market integration. Scharenberg et al. (2014) note that young migrants' risk of remaining without post-compulsory education is four times higher (29%) than that of Swiss natives - and almost twice as high as that of so-called "second-generation immigrants". The upper-secondary drop-out rate is even higher (60%) among those who migrated between 10 and 15 years of age (Gomensoro & Bolzman, 2016). This is why educational attainment is often controlled for when potential "ethnic penalties" in the labour market are assessed (see, for instance, Heath & Cheung, 2007b; Heath et al., 2008). In Switzerland, first- and second-generation youths of migrant background face multiple disadvantages at labour-market entry, such as a higher unemployment rate (Fibbi et al., 2006; Guarin & Rousseaux, 2017) or discrimination (Fibbi et al., 2006; Fibbi, Piguet & Kaya, 2003), a lower likelihood of re-entering the labour market after unemployment (Auer & Fossati, 2018; Bonoli & Turtschi, 2015), limited access to public jobs (Bolzman et al., 2003; Fibbi, Wanner, Topgül, & Ugrina, 2015), lower wages (de Coulon, 2001; Ebner & Helbling, 2016) and so forth.

Contrary to these findings, previous TREE analyses (Gomensoro et al., 2017) have shown that, at age 30, those who migrated to Switzerland during childhood (irrespective of their country of origin or nationality) have a higher rate of gainful employment than the Swiss-born, a lower risk of unemployment and are less often to be found in precarious job positions (fixed-term contracts, on-call work or underemployment). The disadvantages become more visible, however, when we look at monthly incomes, but this may be related to human capital. Foreign-born individuals earn around 500 CHF less per month (full-time equivalent gross income). Unfortunately, recent studies on upper-secondary certification at age 25 (BFS, 2018a) and on the employment situation at age 30 (Gomensoro et al., 2017) fail to take country of origin or nationality into account. Previous research indicates that a substantial proportion of first- and second-generation young adults from the successor countries of former Yugoslavia, Turkey and Portugal face discrimination and greater difficulties with regard to labour-market integration (Bolzman, 2011; Fibbi et al., 2006, 2015; Guarin & Rousseaux, 2017; Zschirnt & Fibbi, 2019).

Little is known about later labour-market outcomes (around age 30 and from a longitudinal perspective) for those who migrated during childhood and attended post-compulsory school in Switzerland. Are there differences with respect to their employment situation, unemployment periods after their last certification, access to public jobs, occupational position, intergenerational mobility or incomes? Do these differences between migrants and natives persist after controlling for educational attainment and other relevant covariates?

We have stated the two questions guiding our enquiry above: All other things being equal, are inequalities in labour-market outcomes the long-lasting effects of having migrated to Switzerland during childhood? Or are inequalities in such outcomes at age 30 the result of prior inequalities such as education, social origin or other characteristics that ultimately “translate” into cumulative disadvantages (DiPrete & Eirich, 2006)? To answer these questions, we must consider both the descriptive situation of this group in the labour market around age 30 and the estimated situation when controlling for educational (and other) differences between the different groups.

3 Educational system, labour market and migration in Switzerland

The Swiss educational system is held to be one of the most unequal among the OECD countries, with particularly low rates of intergenerational social mobility (OECD, 2009). This trend partly owes to early (and largely irreversible) tracking, which starts at lower-secondary education (on average, at grade 7 and age 12) and strongly predetermines post-compulsory educational opportunities (e.g., access to general upper-secondary education) for those attending the “low-achiever” tracks (Meyer, 2011). Tracking or streaming students with low cognitive skills and from lower social strata within the same school classes tends to reinforce the negative effects of social homogamy (Felouzis & Charmillot, 2013). Moreover, children who migrate to Switzerland after the beginning of compulsory school have less time to learn the local language, adapt to the new context and close educational gaps, which leads to this group being largely overrepresented in the low-achieving lower-secondary tracks even after controlling for cognitive skills. The same applies to native students with parents of low socio-economic status (Haeberlin, Imdorf, & Kronig, 2004; Hupka & Stalder, 2004; Kronig, 2007; Meyer, 2011; Stalder & Nägele, 2011). Compared to Swiss natives (10%), both first- (30%) and second-generation students (24%) face substantially increased risks of acquiring only low reading-literacy skills, even when controlling for age, gender and socio-economic status (Felouzis, 2015). At the upper-secondary level of education, most students in Switzerland (60–70%) opt for (mostly company-based) VET, which grants them smooth and early access to the labour market. The allocation of VET training places in companies follows a human capital-driven logic that is similar to that of the labour market at large, as it privileges students from high-achieving school tracks and from families of comparatively higher socio-economic background (Hupka-Brunner, Sacchi, & Stalder, 2011). In addition, some ethnic groups (mainly descendants from the successor countries of Yugoslavia, Turkey and Portugal) face discrimination when searching for VET training places (Imdorf, 2017; Imdorf & Seiterle, 2015).

By international standards, Switzerland features a comparatively high level of labour-market integration among young adults. In 2012, the average employment rate among 30-year-olds in the 28 EU member states was about 75%, the unemployment rate just under 10% and the economic inactivity rate at around 13%. In 2014, the Swiss employment rate among 30-year-olds was at about 90%, while unemployment did not exceed 4% (Gomensoro et al., 2017). The relative risk of youth unemployment in Switzerland is slightly below the OECD and EU average (1.8% versus 2.1 and 2.2%, respectively). In Switzerland, the transition from education to employment proceeds particularly quickly for (upper-secondary) VET graduates. About 50% of them continue to work in their training company, and 85% have found gainful employment within three months after graduation (BFS, 2018b). Once again, some ethnic groups (from former Yugoslavia, Turkey and Portugal) are found to be discriminated against when looking for jobs after obtaining a VET certificate (Bolzman, 2011; Fibbi et al., 2006, 2003, Zschirnt & Fibbi, 2019). Thus, unemployment rates of young people of Turkish or Kosovar origin are five and three times higher, respectively, than the rate among Swiss natives, even when controlling for a number of educational and labour market factors (Guarin & Rousseaux, 2017). In summary, we see that, while Switzerland enjoys enviously favourable conditions of transition from education to employment by international standards, second-generation and migrant young adults face additional barriers and difficulties at every stage thereof.

Switzerland truly is an immigration country. To date, almost 40% of the Swiss population has a migration background (SAKE, 2018). With respect to the TREE cohort under study in this paper, 40% of the surveyed students are migrants or children of migrants (Gomensoro & Bolzman, 2015). According to federal statistics, over half of the children under age 15 live in a migrant household (with at least one immigrant or foreign parent; BFS, 2018c). Those high rates are the result of several successive migratory waves of various national and social origins. A first wave of migration after World War II (1950–1970) was mainly composed of low-skilled labour from Italy and Spain. While this first wave was initially to be only temporary, it eventually turned out to be permanent. Over time and in the wake of changes in immigration laws, many migrants obtained residence permits that allowed for family reunification. A significant proportion of them have already experienced upward social mobility in their first generation (Bolzman et al., 2003).

The second wave of migration (1980–2000) was characterised by a greater diversity of countries of origin and reasons for migration. Low-skilled labour migration from Yugoslavia, Turkey and Portugal increased along with refugees arriving mainly from Kosovo and Turkey during the 1990s (Piguet, 2004). Eventually, towards the end of this second wave, migration in Switzerland shifted from low- to highly skilled, given the increasing demand for highly qualified workers in the labour market (Steiner & Wanner, 2019). Since then, low-skilled migration has been inhibited and unintentionally redirected towards family reunification or asylum. Highly skilled professionals have been attracted from Western and Northern EU countries (Germany, Austria, France, Belgium and Great Britain) or from other post-industrial countries around the world. The share of highly skilled migration has increased further since the adoption of the agreement on the free movement of individuals between Switzerland and the European Union in 2002.

In summary, immigrant descendants differ in terms of their country of origin, migration status and parental socio-economic status (Meyer, 2003), which leads to marked differences in educational and labour-market integration by parental country of birth and migration status (see Table 1). We notice that youth born in Switzerland to foreign-born parents represent 22% of compulsory school-leavers and migrant youths represent 12%. Even though we are interested in differences across national origins and nationalities, the focus of this paper is the effect of having migrated during childhood on labour-market outcomes at age 30.

Table 1: Parental country of birth and respondents' migration status

		Respondents' migration status			Total
		No migration (Swiss origin)	Born in Switzerland (second-generation youths)	Born abroad (first-generation youths)	
Parental country of birth	Switzerland	67%	-	-	67%
	Italy, Spain	-	7%	1%	8%
	Portugal, f. Yugoslavia, Turkey	-	4%	7%	10%
	Germany, Austria, France, Belgium, Great Britain	-	5%	1%	6%
	Other countries	-	6%	2%	8%
Total		67%	22%	12%	100%

Own calculations based on TREE data (weighted).

4 Data, operationalisation and methods

TREE is a Swiss nationwide representative youth panel survey that follows two cohorts of compulsory school-leavers throughout their transitions from education to employment and middle adulthood. In this paper, we use the data of the first cohort based on the Swiss PISA 2000 sample, which has since been followed up nine times over a 14-year period (2001–2014; up to 2007 at yearly intervals) from age 16 to 30 (initially N=6,343; 2014 N=3,423). TREE provides highly detailed information on cognitive skills and academic achievement at the end of compulsory school (based on the PISA 2000 survey) and detailed individual characteristics such as gender, social and migration origin, nationality, canton of residence and more. It also includes highly detailed month-by-month longitudinal data on education, (un)employment and other kinds of activities. The following analyses draw on the employment data from the last available survey wave (2014). All results have been weighted to compensate for biases due to sample attrition (Sacchi, 2011), a common issue in any longitudinal research.

On the basis of descriptives, we propose a number of explanatory regression models to predict the effect of migration characteristics while controlling for relevant characteristics including educational attainment. We use three variables related to migration:

- Youths' country of birth. Two categories: (a) born in Switzerland; (b) born abroad
- Parental country of birth. Four categories: (a) Switzerland; (b) Italy, Spain; (c) Portugal, former Yugoslavia, Turkey ; (d) other countries

- Youths' nationality in 2014. Three categories: (a) Swiss national by birth; (b) Swiss national by naturalisation; (c) foreign national

Below, we use the terms “migrants”, “first-generation youths/respondents” or “youths/respondents born abroad” for respondents that were born abroad and migrated to Switzerland before age 15–16. Unfortunately, given the limited sample size, we could not consider intersectionality between generation of migration, country of origin and nationality. We grouped some parental countries of birth into broader country categories on the basis of the history of migration flows and socio-economic status. Italians and Spaniards mainly arrived from the 1950s to the 1970s as manual workers. Migrants from Portugal, former Yugoslavia and Turkey arrived from the 1980s onward as manual workers or asylum seekers and tend to have a lower socio-economic status than Italians and Spaniards. The category “other countries” encompasses all other countries and is thus highly heterogeneous in terms of geographic and socio-economic background. This makes interpreting the results of “other countries” difficult.

In the following chapter on results, we start by looking at descriptive statistics of the respondents' educational attainment in 2014 around the age of 30 ($N=3,139$), broken down by the three migration variables. Then we focus on the labour-market situation in 2014, that is, at the average cohort age of 30. Those who were still in education in 2014 were excluded from our analyses ($N=2,622$). In a longitudinal perspective, we consider the time spent unemployed after their last certification as well as access to public employment. We then investigate occupational status at age 30 and intergenerational occupational mobility. Finally, we look at differences in monthly income among those who were economically active ($N=2,186$). Further operationalisation details are introduced at the beginning of each section.

5 Results

5.1 Educational attainment

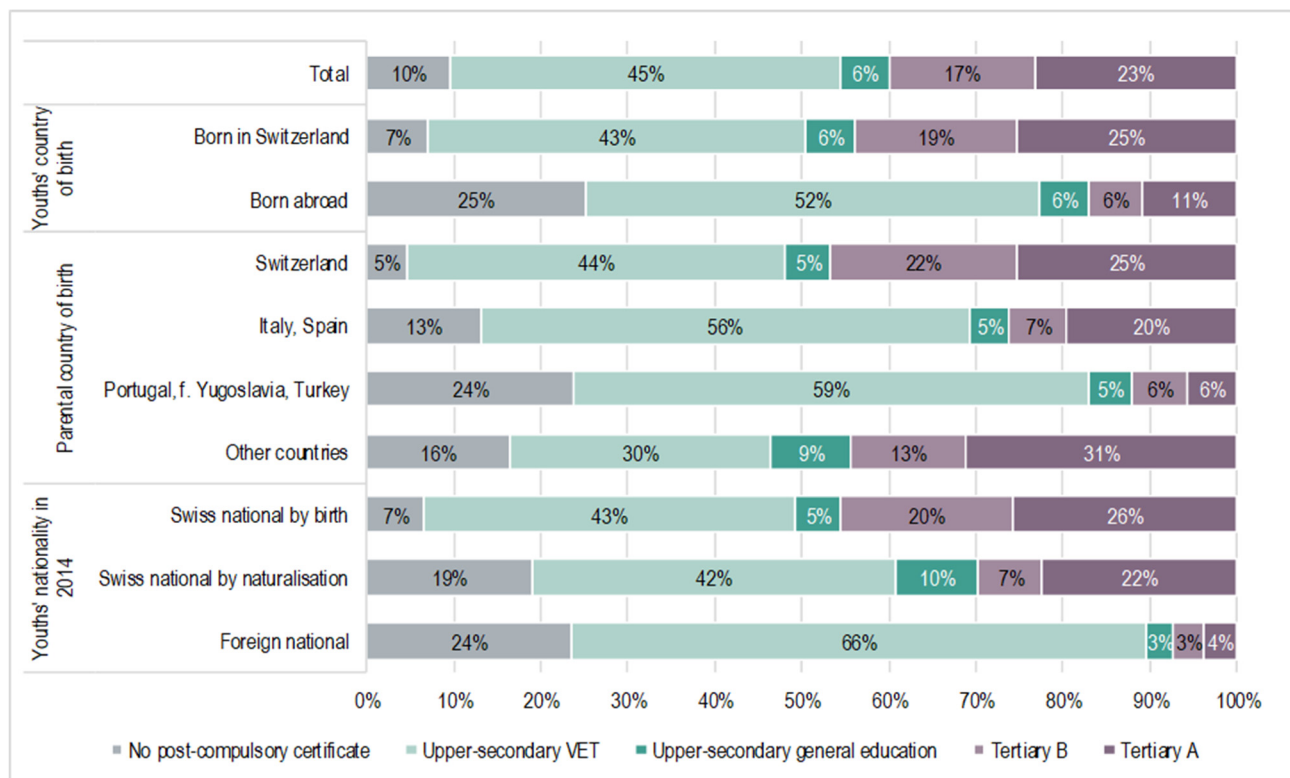
As Figure 1 shows, one-quarter of the respondents born abroad left the education system without an upper-secondary degree, and less than one-fifth reached tertiary education. This situation is problematic in a country where an upper-secondary degree is considered to be the minimum level of educational attainment for successful labour-market integration (Gomensoro et al., 2017; Meyer, 2016b). These proportions deviate substantially from those of youths born in Switzerland, of whom only fewer than one out of ten remain without a post-compulsory degree of any kind and two in five reach tertiary education. Youths with parents born in Portugal, former Yugoslavia and Turkey face a difficult situation with a high rate of no certification (24%) and a low rate of tertiary certification (12%). By contrast, youths whose parents were born in Switzerland reach the benchmark of 95% and exhibit a high rate of tertiary certification (47%). Youths from Italy and Spain are situated between these two extreme groups.

These differences are partly a consequence of the Swiss system's early educational streaming. Respondents with parents from Portugal, former Yugoslavia and Turkey are assigned to the low-requirement

track at the lower-secondary level twice as often, which restricts access to advanced levels of general secondary and later to general tertiary education. More than half of these youths are in the lowest requirement track at the end of compulsory education compared to around 20 to 30% of respondents with parents from Switzerland or other countries (Italy and Spain as well as other countries) (Gomen-soro & Bolzman, 2016). Finally, foreign nationals are more likely to remain without a certificate (24%) and less likely to acquire a tertiary certificate (7%) than Swiss nationals (7 and 46%, respectively), which confirms the idea that educational success increases the odds of a successful naturalisation process (Fibbi et al., 2005) and that naturalisation is a socially selective process (Bolzman et al., 2003).

To summarise, we see that educational outcomes are critical for migrants, for those whose parents are from Portugal, former Yugoslavia and Turkey as well as for those who remain foreign nationals. In other words, “immobility” (to be born in Switzerland to parents who were born in Switzerland) and to have Swiss nationality appear to be clear advantages for educational achievement in the Swiss context. Thus, these educational differences might account for the outcomes in the Swiss labour market. To clarify this, we compared the young adults’ “real” situation in the labour market by migration categories (bivariate) and then controlled for educational outcomes and other relevant variables to see if the differences persisted or not.

Figure 1: Educational attainment at age 30



5.2 Employment situation

By international standards, unemployment and inactivity rates are generally exceptionally low in Switzerland (Gomensoro et al., 2017; SECO, 2018). Contrary to our expectations - and the educational outcomes discussed above - there is no significant difference in labour-market participation rates at age 30 with regard to any of the migration characteristics. This surprising finding underlines the exceptional situation of low-skilled and unqualified workers in the Swiss labour market (Eurostat, 2018b, 2018a; Gorodzeisky & Semyonov, 2017). It not only absorbs a significant share of highly skilled workers (Meyer, 2016a) but of unskilled labour as well (irrespective of migration status).

Our multinomial regression model for predicting employment status in 2014 shows that only the youths' country of birth has a significant effect on their employment status. Compared to those born in Switzerland, those born abroad are more economically active and less inactive. A conceivable explanation could be that labour-market entrants with a migration background are allocated to positions with lower salaries and that they have less economic leeway to be inactive. What we see, however, is that other variables in the model (e.g., gender and parenthood, educational outcomes, language region) prove to have a much greater impact on labour-market status at age 30 (see Gomensoro et al., 2017 for comments on the effect of those variables).

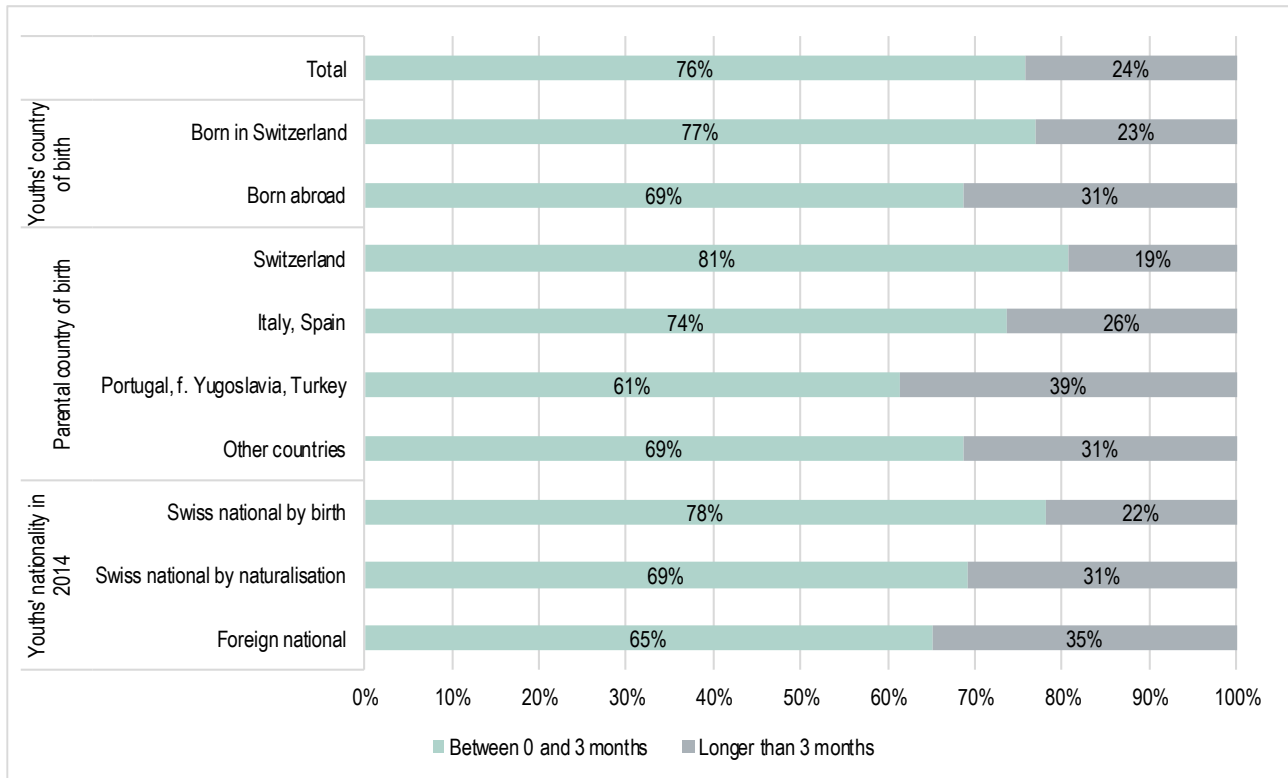
5.2.1 *Longitudinal measures of unemployment*

In light of the many studies that identify increased unemployment risks and discrimination for second-generation youths (Bolzman, 2011; Fibbi et al., 2006, 2003; Guarin & Rousseaux, 2017), we developed two longitudinal measures based on their monthly labour-market activities between 2003 and 2014 (128 months of observation) and on the date of their last certification. Let us first look at the number of months spent “not in employment, education or training” (NEET) during the year following graduation. Figure 2 displays all types of migration characteristics considered in our model that are systematically associated with increased risks of being NEET for more than three months in the year following graduation. Our results confirm a more complex transition from school to employment for young people with a migration background.

Second, we looked at the proportion of months spent in unemployment since graduation (see Figure 3). Similar to the results in Figure 2, we see that, compared to the “natives”, the respective rates are systematically higher across all migration categories. Young adults with parents from Italy or Spain spent more than twice as much time unemployed as those with Swiss-born parents. This is also the case for naturalised nationals compared with Swiss nationals by birth. In summary, this longitudinal perspective demonstrates that migrants incur an increased risk in terms of both the number of months spent as NEET in the year after graduation and the cumulative time spent in unemployment.

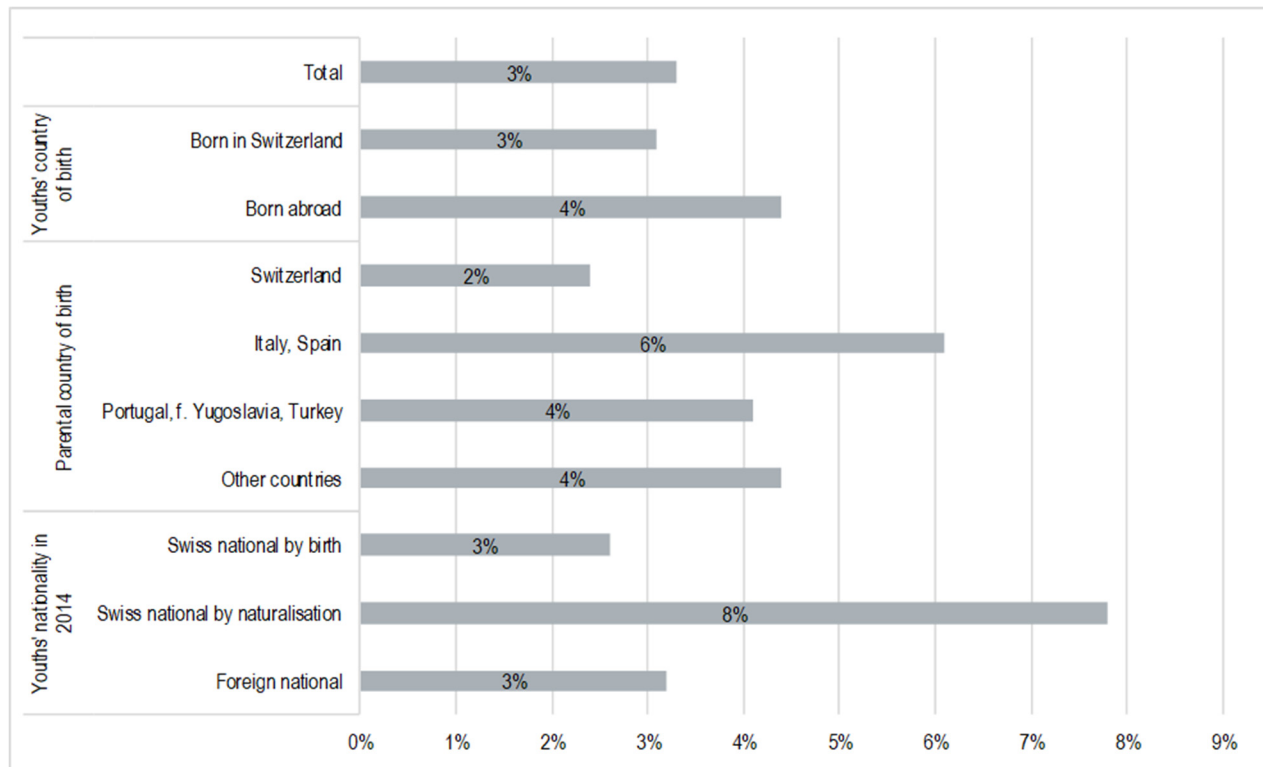
However, these differences could conceivably result from a differential risk of unemployment or NEET according to type of education or economic branch. For instance, the risk of being unemployed or NEET could be higher for those without a post-compulsory degree or for those looking for a job in certain economic sectors (BFS, 2018b).

Figure 2: Time spent as NEET up to 12 months after last degree obtained



In our linear regression models that control for educational attainment, we notice that only having parents born in Portugal, former Yugoslavia, and Turkey has a significant effect on NEET (all other things being equal). Compared to those with parents born in Switzerland, they spend around 45 more days outside the labour market during the year after graduation. Thus, even after controlling for relevant variables, including type of certification, we see that some migrant groups experience longer periods outside the labour market. Our results are in line with those of Auer and Fossati (2018), who observed that individuals of non-EU origin face longer periods of unemployment than Swiss natives (whether they were born in Switzerland or obtained the Swiss nationality) and that those differences are explained by employers' discriminatory hiring behaviour (Auer, Bonoli, & Fossati, 2017; Auer & Fossati, 2018; Fibbi et al., 2006, Zschirnt & Fibbi, 2019). There are, by contrast, no differential unemployment risks by other migration categories, all other things being equal. Those results highlight the impact of the type of educational degree and the discrimination in the labour market against specific ethnic groups. From a methodological viewpoint, the findings further strongly suggest employing longitudinal measures of labour-market outcomes instead of cross-sectional ones.

Figure 3: Time spent in unemployment since most recent degree obtained



Note: The percentages were obtained by dividing the number of months spent unemployed by the number of months between graduation and the (last) TREE survey wave in 2014. The average number of months of the denominator is 80 and varies by type of degree (approx. 100 months for upper-secondary VET versus approx. 40 months for general and professional tertiary certification).

5.2.2 Access to the public sector

In addition to the unemployment rate, access to the public sector is often considered another good indicator of the occupational assimilation of young people of immigrant origin (Liebig & Widmaier, 2009). The public sector is an important supplier of jobs in Switzerland (around 15%; BFS, 2015) to which, in certain cases, access may be restricted for foreign nationals. Bolzman, Fibbi and Vial (2003) state that, compared to Swiss natives, second-generation youths from Italy and Spain have less access to public jobs, and even less so when they are not naturalised. Fibbi et al. (2015) found that this is also the case for the second-generation respondents from Turkey and former Yugoslavia and that differences persist for the second group even after controlling for educational levels.

For the TREE cohort, however, we found no such differences by country of birth: around 17% of both Swiss-born and foreign-born respondents work in the public sector. Yet we did notice some differences by parental country of birth: 20% of youths with parents born in Switzerland work in the public sector, whereas this is the case for only 12% of those from Italy and Spain and 15% of those from Portugal, former Yugoslavia and Turkey. The differences are even greater between Swiss nationals (by birth or naturalised: 18%) and foreign nationals (8%), thus confirming the access gap by educational attainment and nationality and the fact that many jobs in the public sector are accessible only to Swiss nationals (Bolzman et al., 2003).

5.3 Occupational status and inter-generational mobility

Beyond general labour-market participation, a study on labour-market outcomes should also pay attention to the stratification dimension of labour-market integration. Surprisingly, very few studies in Switzerland have addressed migration-specific aspects of occupational status, and even fewer have addressed intergenerational occupational mobility despite the relevance of these factors to migration and integration policy (see, for instance, Bolzman et al., 2003; Fibbi et al., 2015; Lessard-Phillips, Fibbi, & Wanner, 2012). Occupational status is a central indicator of social milieu, living conditions and life chances in classical assimilation theories (Gordon, 1964; Park & Burgess, 1921) as well as in more recent segmented assimilation theories in the United States (Portes & Zhou, 1993) and Europe (Lessard-Phillips et al., 2012). The assimilation literature questions if descendants of immigrants are constrained to occupying subordinate positions or, to the contrary, if the host society (in a broad sense, which includes the education system, the labour market, migration policies, etc.) offers them opportunities to be fully integrated into diverse social strata (in the same proportions as natives).

As the TREE data allows us to identify the occupational status of both respondents and their parents, we can assess to what extent migrants have reached parity with their native peers in this respect and to what extent labour market (dis)advantages found in the parents' generation are reproduced in the respondents' generation. In this section, we introduce descriptive statistics and results that account for educational differences across migration categories. Occupational position is measured by the International Socio-Economic Index (ISEI) of TREE respondents in 2014 (at around age 30) and (the highest) parental ISEI in 2000. The ISEI classifies socio-economic positions on a continuous scale (Ganzeboom, De Graaf, & Treiman, 1992). In the lowest positions on this scale, we find occupations such as domestic helpers, cleaners and pressers, and similar (ISEI around 15–20), whereas in the highest positions we find professions such as lawyers or medical doctors (ISEI around 85–90).

Before we present our data, we would like to point out some limitations of using ISEI (averages). First, ISEI means may conceal large intra-group heterogeneity. Second, the TREE survey provides no information on parental age, occupational status before migration and the number of years that parents have spent in Switzerland. Consequently, we can neither control for the relative position in their occupational biography nor for any possible devaluation of human capital acquired in their country of origin. When comparing intergenerational mobility, we should also keep in mind floor and ceiling effects of the ISEI scale and the statistical phenomenon of regression to the mean to the following generation. For instance, it is easier and more probable for youths to reach a higher occupational position than their parents if the latter are at the bottom of the ISEI scale. The opposite is also true: it is more difficult to reach a higher position if parental ISEI is at the top of the scale. While bearing these limitations in mind, we conducted additional descriptive and regression analysis of the youths' ISEI and of intergenerational mobility ISEI (drawing on methods used by OECD, 2018a; Raitano & Vona, 2015; Thijssen & Wolbers, 2016).

Figure 4 illustrates the mean parental ISEI in grey dots and the mean ISEI of youths at an average age of 30 in blue dots by the three migration categories used throughout this paper. We first notice that, on average, youths born abroad are to be found in lower occupational positions than native youths.

This is still the case after controlling for educational level, gender and linguistic region (the average difference decreases from 7 to 5 points on the ISEI scale). In addition, youths born abroad tend to experience less upward intergenerational occupational mobility than natives (results not published here), whereas the parents of the former are at the bottom of the ISEI scale (there is a floor effect in this case). These results clearly show that being born abroad and having migrated during compulsory schooling has a negative impact on social position and on the chances of upward intergenerational occupational mobility even after controlling for educational level.

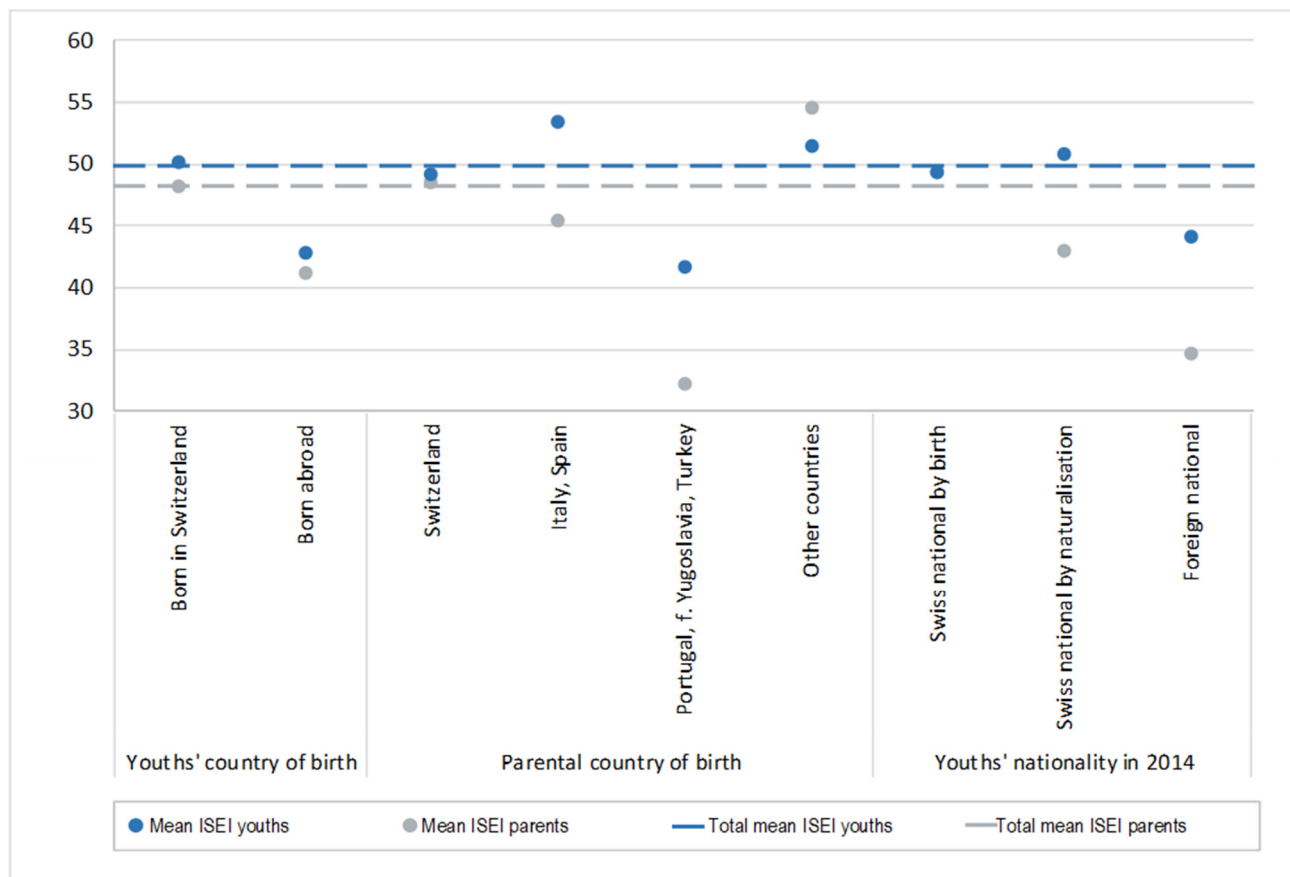
Second, we observe that, compared to Swiss natives, youths with parents born in Italy and Spain reach a higher social position even if they come from a lower social background (modest parental education and occupation). When controlling for educational attainment, we find that those with parents born in Italy or Spain reach an even higher average ISEI than natives (the average difference increases from 3 to 5 ISEI points). As for intergenerational mobility, youths of Italian and Spanish origin have made substantial headway (from below average to above average) in terms of occupational status compared to their parents' generation. Irrespective of their parents' occupational level, they tend to be more upwardly mobile than youths with native Swiss parents (almost three-quarters of youths from Italy and Spain and only around 40% of youths from Switzerland are upwardly mobile). We can thus confirm that this group experiences the same upward mobility path as previous migrant youth cohorts (Bolzman et al., 2003; Fibbi et al., 2005). Among other things, this is essentially achieved through significant access to tertiary education. Bolzman et al. (2003) stated that parental migration to Switzerland has been characterised by high aspirations for their children's social mobility - which they were unable to achieve themselves.

Contrariwise, youths with parents born in Portugal, former Yugoslavia and Turkey remain under the mean ISEI level, but the average difference to native youths decreases (from 5 five to 2 ISEI points) when controlling for educational attainment. Even though we notice an important upward mobility trend across generations, the (relatively low) social status of youths from more recent migration waves seems to be strongly associated with lower educational attainment. Previous studies (Bolzman & Gomensoro, 2011; Fibbi et al., 2015, 2015; Gomensoro & Bolzman, 2015, 2016) hold that only a minority of those groups reach high levels of educational attainment and that the majority of them are oriented toward upper-secondary VET degrees and/or drop out of school early. In addition, the flourishing labour market in Switzerland, which also absorbs people with low levels of education (Gomensoro et al., 2017), seems to offer better opportunities for occupational integration and mobility for the children of immigrants than in other European economies (Lessard-Phillips et al., 2012). As for youths with parents born in other countries, their ISEI is above the mean but lower than among their parents' generation. A ceiling effect related to parents with high average ISEI might explain this downward mobility. We must, however, be aware that significant intra-group heterogeneity calls for a cautious interpretation of these results.

Finally, Figure 4 highlights that naturalised Swiss nationals reach a slightly higher occupational level than Swiss nationals by birth. This supports the hypothesis that those who succeed in education and in the labour market are more likely to obtain Swiss nationality (the opposite seems less likely). Fibbi et al. (2005) have observed the same phenomenon. Foreign nationals reach lower occupational levels

than Swiss nationals by birth. Nonetheless, these differences vanish when we control for educational level, thus confirming that foreign nationals reach lower social positions not because they are not Swiss nationals but because of their lower levels of education. With regard to intergenerational mobility, there is distinct evidence that naturalised Swiss nationals and foreign nationals are more upwardly mobile than Swiss-born nationals. Our regression models (not published here) show that naturalised Swiss nationals, and to a lesser extent foreign nationals, have a higher likelihood of being upwardly mobile. This underscores the selectivity of the naturalisation process and confirms the immigrant optimism hypothesis (Kao & Tienda, 1995).

Figure 4: Average socio-economic status of youths in 2014 and of parents in 2000 (ISEI = International Socio-Economic Index)

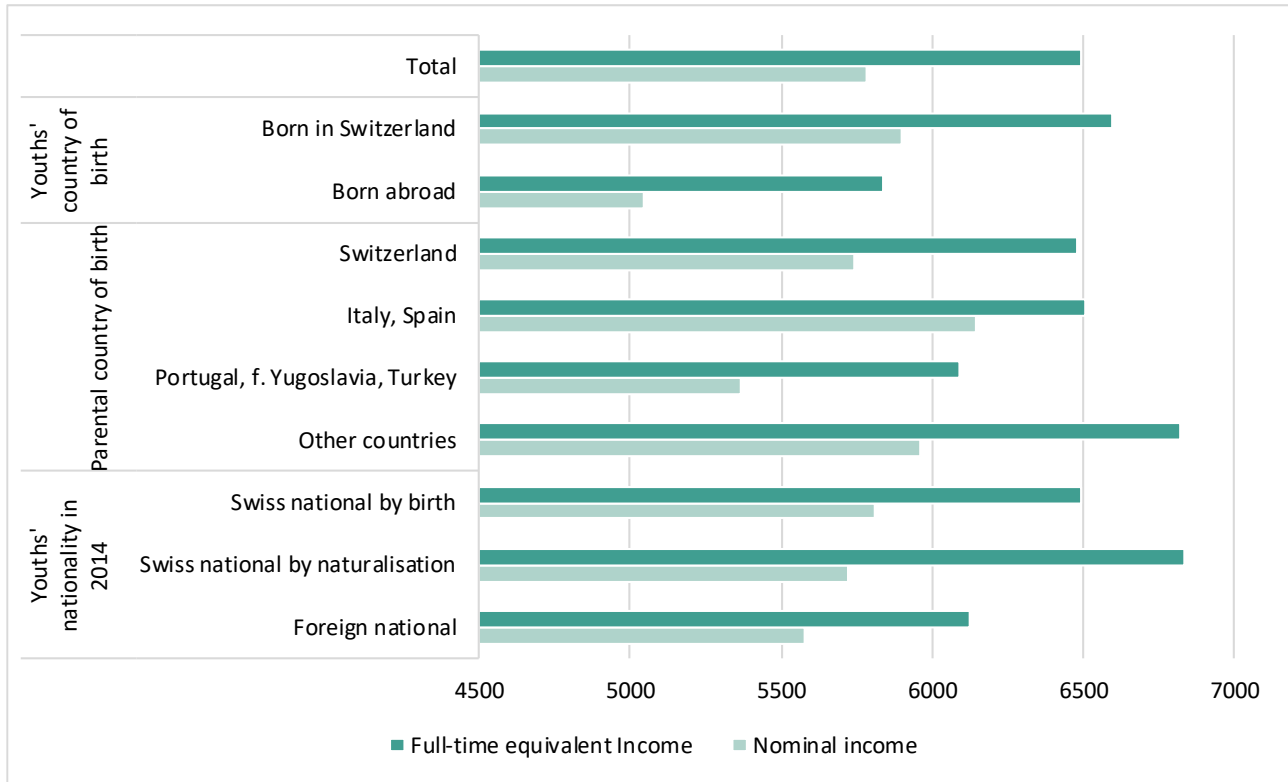


5.4 Income

Income is considered to be an important indicator of economic resources and economic assimilation. In this section, we compare nominal and full-time equivalent monthly gross income. At age 30, the respondents' nominal income has reached approximately 5,800 CHF, which corresponds to approximately 6,500 CHF calculated at full-time equivalents. In previous publications (Gomensoro et al., 2017), we observed substantial disparities by gender, migration generation, language region and educational attainment both with regard to nominal and full-time equivalent wages. We propose to build on previous results by examining the differences for the three migration variables more closely and by developing a comprehensive linear regression model that includes individual, educational, occupational and spatial characteristics.

Figure 5 shows that young adults born abroad earn substantially less (almost 15 %, around 800 CHF) than youths born in Switzerland, both in terms of real and full-time equivalent incomes. We can thus confirm our hypothesis that migrants enter the labour market in inferior positions with lower salaries and, for this reason, probably have less leeway to be economically inactive. In addition, young people from Portugal, former Yugoslavia and Turkey tend to earn less than youths from other countries. Naturalised Swiss nationals have a higher average full-time equivalent income than their Swiss-born counterparts and foreign nationals (the differences in the latter case are not statistically significant).

Figure 5: Monthly gross income in 2014; full-time equivalent and nominal



The question is how we can know if there is any significant wage gap across the three migration variables when controlling for several relevant co-variables such as individual, educational, occupational and regional characteristics. If so, we may assume a disadvantage (or advantage) for some groups with a migration background. In Table 2, we introduce a linear regression model with nominal income as the dependent variable and gender and parenthood, country of birth of youths and their parents, nationality of youths, educational attainment, economic branch of their main job, months spent in unemployment during the year after their last certification, adequacy of match between education and job requirements, language region and working hours per week as independent variables. This model allows us to observe the hypothetical income difference between the reference category and other categories of a variable while controlling for the effect of all the other variables.

The income differences by gender and parenthood situation are considerable. Women with or without child(ren) and who are economically active earn significantly less than men without children (around 650 and 825 CHF, respectively, or 10%). Several explanatory leads can be advanced. Gender wage gaps open early on in an occupational career, as young women enter the labour market in traditionally

female occupations that yield salaries inferior to traditionally male or mixed-gender occupations (Bertschy, Walker, Baeriswyl, & Marti, 2014). It could also be that part-time jobs tend to pay lower wages (Schmid, 2016) and women, more specifically mothers, work part-time more often (Gomensoro et al., 2017). In making choices, they might be anticipating their (future) family life and accepting jobs that fit with roles and tasks within the family but not necessarily with their qualifications (Schmid, 2016). In addition, a survey experiment in Switzerland (Oesch, Lipps, & McDonald, 2017) has shown the existence of a large wage penalty for young mothers because recruiters discriminate against them. There is a gender wage gap of between 3 to 6% in favour of men that is unexplained by individual, educational or occupational characteristics and thus not related to family formation or to the household division of labour.

At average age 30, there are significant income differentials between those who graduated from tertiary-level education and those who did not (Meyer, 2016b). All other things being equal, young people with tertiary-level degrees earn between 900 and 1,300 CHF more per month than those with upper-secondary degrees only. In addition, it is surprising to see that there is no significant income difference between upper-secondary VET graduates and individuals without any post-compulsory degree at all.

Many occupational variables (cross-sectional or longitudinal) have an impact on income at age 30. All else being equal, working in the financial and insurance sector pays 1,000 CHF more than working in public administration, defence or social security. By contrast, working in certain economic branches reduces average income, for example, manufacturing (-550 CHF), human health and social work (-700 CHF) and agriculture, forestry and fishing (-1500 CHF). Other factors also reduce average income. As Helbling and Sacchi (2014) have shown for VET graduates, we observe a scarring effect of early unemployment on income at age 30. Compared to the group that was never unemployed in their first year after graduation, those who experienced 1 to 6 months of unemployment earn around 650 CHF less and those who were unemployed 7 to 12 months about 900 CHF less. In addition, young people who perceive a mismatch between their educational credentials and their job requirements earn 650 CHF less per month than those who do not. Moreover, incomes are significantly lower (-775 CHF) in the French- and Italian-speaking parts of the country.

With regard to the variable “respondents’ country of birth, we observe a net migration penalty on income in Switzerland even after controlling for individual, educational, occupational and regional characteristics. Those who migrated during childhood earn almost 700 CHF (15%) less than those born in Switzerland. One explanation might be that they obtain low-requirement VET certificates and reach more modest social positions within the same educational attainment level and economic branches controlled for in the model. Another explanation could be, as De Coulon (2001) advocates, that the immigrant wage gap in Switzerland is related to differences in work experience and that characteristics of migrants (e.g., education, job experience) are less rewarded in the labour market than those of natives. In addition to this argument, Mueller & Ramirez (2009) observed that unskilled migrants earn lower wages than equally skilled native workers, which suggests wage discrimination. It might also be that migrants (and their families) lack social capital that facilitates the process of finding VET training places or jobs (Liebig, Kohls, & Krause, 2012).

Our results for the variable “parental country of birth” show no significant income differentials. If people of some ethnic origins are subject to labour market discrimination (Bolzman, 2011; Fibbi et al., 2003; Wanner & Fibbi, 2009, Zschirnt & Fibbi, 2019), it does not seem to result in wage differences across ethnic groups. Rather than ethnic origin, the lower full-time equivalent income of the descendants of migrants from Portugal, former Yugoslavia and Turkey (see Figure 4) seems to be related to educational and occupational characteristics.

Finally, we observe large and significant differences by nationality. Naturalised Swiss nationals earn around 700 CHF more per month than Swiss-born nationals, whereas there is no significant difference between the latter and foreign nationals. The model confirms bivariate full-time equivalent advantages of naturalised Swiss nationals compared to Swiss nationals by birth. In light of the model’s comprehensive control of educational and occupational characteristics, the results suggest that the naturalisation process is highly selective. Those who are more successful in education and their occupational career - but also those who are better assimilated and acculturated, of higher social background and have greater local language proficiency - are more likely to acquire Swiss nationality. By contrast, those who are less educationally or occupationally successful (for instance, those who have been dependent on social assistance), of a modest social background, have a criminal record or remain closely attached to their culture of origin (language, cultural activities, social networks, etc.) are less likely to become Swiss nationals (Bolzman et al., 2003; Fibbi et al., 2005). Our results are consistent with the idea that naturalisation improves labour-market opportunities in general rather than just access to specific job positions in the public sector. To conclude, Table 2 illustrates that among the migration variables - all else being equal - only being born abroad seems to predict a significant wage disadvantage.

Table 2: Linear regression model for predicting nominal income in 2014

	Coef.	Robust std. err.	t	P> t	95% confidence inter- val	
Gender and parenthood ¹						
Male with child(ren)	128	298	0.43	0.67	-456	713
Female without child(ren)	-644	184	-3.50	0.00	-1,005	-284
Female with child(ren)	-825	246	-3.36	0.00	-1,306	-343
Respondents' country of birth ²						
Born abroad	-694	313	-2.22	0.03	-1,308	-80
Parental country of birth ³						
Italy, Spain	339	299	1.13	0.26	-248	927
Portugal, f. Yugoslavia, Turkey	302	309	0.98	0.33	-304	907
Other countries	423	253	1.67	0.10	-74	920
Respondents' nationality in 2014 ⁴						
Swiss national by naturalisation	701	364	1.93	0.05	-12	1414
Foreign national	448	393	1.14	0.26	-323	1219
Educational attainment in 2014 (around age 30) ⁵						
No post-compulsory certificate	378	466	0.81	0.42	-536	1,293
General upper-secondary education	-95	238	-0.40	0.69	-562	372
Tertiary B	909	285	3.19	0.00	351	1,468
Tertiary A	1,284	172	7.47	0.00	947	1,622
Economic branch of main job in 2014 ⁶						
Manufacturing	-557	253	-2.20	0.03	-1,055	-60
Construction	-350	621	-0.56	0.57	-1,568	867
Agriculture, forestry and fishing; other secondary sector (industry)	-1,516	382	-3.97	0.00	-2,264	-768
Wholesale and retail trade; repair	-476	318	-1.50	0.13	-1,099	147
Financial and insurance activities	1,037	388	2.68	0.01	277	1798
Human health and social work activities	-703	271	-2.60	0.01	-1,234	-172
Other tertiary sector	-513	236	-2.17	0.03	-976	-50
Months spent unemployed after last certification ⁷						
1-6 months	-648	164	-3.94	0.00	-971	-326
7 or more months	-918	260	-3.53	0.00	-1,428	-408
Adequacy of match between education and job requirements (subjective evaluation) ⁸						
Close education and job	-75	179	-0.42	0.67	-425	275
Mismatch between education and job	-652	231	-2.82	0.01	-1,106	-199
Missing	-764	426	-1.79	0.07	-1,599	71
Linguistic region ⁹						
Latin (French- & Italian-speaking regions)	-771	153	-5.03	0.00	-1071	-470
Working hours per week ¹⁰	140	10	13.80	0.00	120	160
Constant	1,186	442	2.68	0.01	319	2,052
Number of obs. = 2,186 R-squared = 0.4640 Prob > F = 0.0000						
F(27, 2,186) = 49.15 Root MSE = 1,871.1						
Reference categories: ¹ Men without child(ren), ² born in Switzerland, ³ Switzerland, ⁴ Swiss national by birth, ⁵ upper-secondary VET, ⁶ public administration and defence; compulsory social security, ⁷ 0 months, ⁸ match between education and job, ⁹ German-speaking Switzerland, ¹⁰ maximum hours per week = 42.						
Note: All calculations were performed on weighted samples to account for sample attrition across the various panel waves (Sacchi, 2011).						

6 Discussion and conclusion

This paper has addressed the educational and occupational situation of migrants and natives at average age of 30. More specifically, it has focused on the long-term effects of migration during early childhood (between 0 and 15). While it is widely known that educational attainment is affected by migration during childhood, our objective was to investigate if there is any effect on labour-market outcomes once education is controlled for. To this end, we used three migration-specific variables: (a) respondents' country of birth, (b) parental country of birth and (c) respondents' nationality. We looked at (a) the respondents' real situation in terms of educational attainment, occupational situation, social mobility and income and (b) predicted situations (when controlling for educational attainment and other relevant characteristics) to assess if differences persist or not.

Our results underline the importance of a longitudinal perspective and the need to consider several indicators of the situation in the labour market. They reveal the importance of human capital in explaining differences by migration categories, but sometimes differences remain even in spite of similar levels of human capital.

We first observed that, while around 90% of all youth in Switzerland complete upper-secondary education, migrants, particularly those from Portugal, former Yugoslavia and Turkey and those who remain foreign nationals, do so at a rate of only around 75%.

Second, at first glance, there seems to be no differences in terms of aggregate labour-market outcomes (activity rate, unemployment, inactivity rate). However, differences emerge at finer levels of observation. In a longitudinal and cumulative perspective, having a migration background substantially increases the risk of being unemployed or NEET (not in education, employment or training). When controlling for level of education (and other relevant characteristics), only youths originally from Portugal, former Yugoslavia and Turkey have incurred increased risks of being unemployed or NEET. These results confirm the discrimination hypothesis for those ethnic groups (Auer et al., 2017; Auer & Fossati, 2018; Fibbi et al., 2006) and show that there is no direct effect of having migrated during childhood (only a composition effect related to educational attainment and other characteristics). Ethnicity matters more than migration status when we look longitudinally at unemployment or NEET in Switzerland.

Third, we found significant differences with regard to occupational position and intergenerational mobility by migration background. Youths who migrated during childhood were in lower occupational positions than native youths and ones similar to their parents. The negative impact of having migrated during childhood remains even after controlling for educational attainment and other characteristics. Unfortunately, they seem to be stuck on the lower rungs of the social ladder with equally low chances of upward intergenerational occupational mobility (when controlling for education).

Fourth, our analyses of the impact of the variable "country of origin" shows that youths originally from Italy, Spain and "other countries" reach higher social positions than their peers from Switzerland do. Particularly those from Italy and Spain substantially increase their social position compared

to their parents. Those from Portugal, former Yugoslavia and Turkey also exhibit a high degree of intergenerational social mobility. In having to start from a particularly low parental status, however, they do not succeed in closing the gap to their peers. Even though we could detect a significant upward mobility trend across generations, the social status of youths from more recent migration waves seems to be strongly associated with lower educational attainment.

Fifth, our findings for the variable “nationality” underscore that foreign nationals occupy modest occupational positions at age 30, whereas naturalised Swiss nationals even outperform Swiss nationals by birth in terms of intergenerational upward mobility. These unexpected results are difficult to interpret and call for further research (on the effects of language proficiency, the time that the youths’ families have lived in Switzerland, the occupation of parents before and after migrating to Switzerland, probable discrimination according to the type of residence permit, etc.). Generally speaking, we can state that youths with a migration background experience upward occupational mobility that is partly, but not exclusively, related to education (except if born abroad or originally from “other countries”).

Sixth and last, our descriptive findings also indicate that having a migration background is associated with lower income (except for those who have acquired a Swiss passport via naturalisation). However, our linear regression model that controls for educational, occupational and other characteristics shows that the “migration-background wage gap” eventually disappears except for those who migrated during childhood. What remains is a “foreign-born wage penalty” at age 30.

In summary, we see that most of the differences between migration-specific groups are related to previous educational and occupational outcomes. While youths who are born abroad, who are born to parents born abroad or who remain foreigners are clearly disadvantaged with regard to educational attainment, the situation is more diverse in the labour market, probably because at age 30 the respondents are still at the beginning of their occupational careers. Cumulative (dis)advantages are clearly present at the educational level, whereas the situation is more complex when it comes to integration into the labour market.

Limitations

One of the limitations of this paper is that we had to group some of the parental countries of birth into broader country categories. Unfortunately, this probably conceals differences within the aggregate categories. Further, it was not possible to account for the intersectionality between migration variables (migration status, country of origin and nationality) because of the limited sample sizes. It might also be interesting to investigate potential interaction effects between gender or level of education and migration background. Finally, whenever possible, longitudinal indicators should be used to assess individuals’ occupational situation (as we did for unemployment) since they reveal hidden variations and evolution over the life course. For instance, an interesting approach to comparing pathways from the end of compulsory education up to age 30 could be sequence analysis, a method that has paid off when studying earlier life transitions by migration background (Gomensoro & Bolzman, 2015; Laganà, Chevillard, & Gauthier, 2014) or by educational attainment, gender and social origin (Samuel, Bergman, & Hupka-Brunner, 2013; Zimmermann & Seiler, 2019).

7 References

- Auer, D., Bonoli, G. & Fossati, F. (2017). Why do immigrants have longer periods of unemployment? Swiss evidence. *International Migration*, 55(1), 157–174.
- Auer, D. & Fossati, F. (2019). The absent rewards of assimilation: How ethnic penalties persist in the Swiss labour market. *The Journal of Economic Inequality*, 17(2), 285–299.
- Bacher, J., Hirtenlehner, H. & Kupfer, A. (2010). Politische und soziale Folgen von Bildungsarmut. In *Bildungsverlierer* (pp. 475–496).
- Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. Cambridge: The National Bureau of Economic Research.
- Bertschy, K., Walker, P., Baeriswyl, A. & Marti, M. (2014). Gender wage gap at career entry. A quantitative analysis for Switzerland. *Swiss Journal of Sociology*, 40(2), 279–305.
- BFS (2015). *Branchenporträt des öffentlichen Sektors (konsolidierte Daten 2012)*. BFS.
- BFS (2018a). *Taux de première certification du degré secondaire II et taux de maturités*.
- BFS (2018b). *Transitions après un titre du degré secondaire II et intégration sur le marché du travail*. BFS.
- BFS (2018c, October 11). *Ständige Wohnbevölkerung im Alter von 0 bis 14 Jahren nach Migrationsstatus des Haushalts und Alter des Kindes, 2011–2013, 2014–2016, 2011–2013, 2014–2016*.
- Bolzmann, C. (2011). Access to employment for children of immigrants: An exploratory review of several explanatory factors. *Revue suisse de travail social*, 1(2), 64–79.
- Bolzmann, C., Fibbi, R. & Vial, M. (2003). *Secondas – Secondos. Le processus d'intégration des jeunes adultes issus de la migration espagnole et italienne en Suisse*. Zurich: Seismo.
- Bolzmann, C. & Gomensoro, A. (2011). Schulkinder von Familien aus der Türkei. In M. Ideli, V. Suter Reich & H.-L. Kieser (eds.), *Neue-Menschenlandschaften. Migration Türkei-Schweiz 1961–2011*. Zurich: Chronos.
- Bonoli, G. & Turttschi, N. (2015). Inequality in social capital and labour market re-entry among unemployed people. *Research in Social Stratification and Mobility*, (42), 87–95.
- Crul, M., Schneider, J. & Lelie, F. (eds.). (2012). *The European Second Generation Compared: Does the Integration Context Matter?* Amsterdam: Amsterdam University Press.
- Crul, M., Schnell, P., Herzog-Punzenberger, B., Wilmes, M., Slootman, M. & Aparicio, R. (2012). School careers of second-generation youth in Europe. Which education systems provide the best chances for success? In M. Crul, J. Schneider & F. Lelie, *The European Second Generation Compared: Does the Integration Context Matter?* (pp. 101–164). Amsterdam: Amsterdam University Press.

- de Coulon, A. (2001). Wage differentials between ethnic groups in Switzerland. *LABOUR*, 15(1), 111–132.
- DiPrete, T. A. & Eirich, G. M. (2006). Cumulative advantage as a mechanism for inequality: A review of theoretical and empirical developments. *Annual Review of Sociology*, 32(1), 271–297.
- Ebner, C. & Helbling, M. (2016). Social distance and wage inequalities for immigrants in Switzerland. *Work, Employment and Society*, 30(3), 436–454.
- EDK (2006). Lignes directrices pour l’optimisation de la transition scolarité obligatoire – degré secondaire II.
- EDK (2011). *Projet de transition: rapport final*.
- EDK (2015). Transition scolarité obligatoire – degré secondaire II: Déclaration programmatique des cantons, de la Confédération, des organisations du monde du travail, des organisations de la profession enseignante.
- Eurostat (2018a). First and second-generation immigrants – statistics on employment conditions Eurostat Statistics Explained.
- Eurostat (2018b). Unemployment statistics. Eurostat Statistics Explained.
- Felouzis, G. (2015). Ce que l’école fait aux plus faibles: une comparaison dans 13 cantons suisses. In G. Felouzis & G. Goastellec (eds.), *Les inégalités scolaires en Suisse* (pp. 17–42). Bern: Peter Lang.
- Felouzis, G. & Charmillot, S. (2013). School tracking and educational inequality: A comparison of 12 education systems in Switzerland. *Comparative Education*, 49(2), 181–205.
- Felouzis, G. Charmillot, S. & Fouquet-Chauprade, B. (2016). Les élèves de deuxième génération en Suisse: modes d’intégration scolaire et compétences acquises dans 13 systèmes éducatifs cantonaux. *Swiss Journal of Sociology*, 42(2), 218–244.
- Fend, H., Berger, F. & Grob, U. (eds.). (2009). *Lebensverläufe, Lebensbewältigung, Lebensglück: Ergebnisse der Life-Studie* (2009 edition). Wiesbaden: VS Verlag für Sozialwissenschaften.
- Fibbi, R., Lerch, M. & Wanner, P. (2006). Unemployment and discrimination against youth of immigrant origin in Switzerland: When the name makes the difference. *Journal of International Migration and Integration/Revue de l’intégration et de la migration internationale*, 7(3), 351–366.
- Fibbi, R., Lerch, M. & Wanner, P. (2007). Naturalisation and socio-economic characteristics of youth of immigrant descent in Switzerland. *Journal of Ethnic and Migration Studies*, 33(7), 1121–1144.
- Fibbi, R., Lerch, M. & Wanner, P. (2011). School qualifications of children of immigrant descent in Switzerland. In R. Alba & M. C. Waters (eds.), *The Next Generation. Immigrant Youth in a Comparative Perspective* (pp. 110–134). New York, London: NYU Press.

- Fibbi, R., Lerch, M., Wanner, P., Mey, E., Rorato, M. & Voll, P. (2005). *L'intégration des populations issues de l'immigration en Suisse: personnes naturalisées et deuxième génération*. Neuchâtel: Office fédéral de la statistique.
- Fibbi, R., Piguët, E. & Kaya, B. (2003). *Nomen est omen: Quand s'appeler Pierre, Afrim ou Mehmet fait la différence*. Bern: Direction du programme PNR43.
- Fibbi, R., Wanner, P., Topgül, C. & Ugrina, D. (2015). *The New Second Generation in Switzerland: Youth of Turkish and Former Yugoslav Descent in Zurich and Basel*. Amsterdam: Amsterdam University Press.
- Ganzeboom, H. B. G., De Graaf, P. M. & Treiman, D. J. (1992). A standard international socio-economic index of occupational status. *Social Science Research*, 21(1), 1–56.
- Gomensoro, A. & Bolzman, C. (2015). The effect of the socioeconomic status of ethnic groups on educational inequalities in Switzerland: Which “hidden” mechanisms? *Italian Journal of Sociology of Education*, 7(2), 70–98.
- Gomensoro, A. & Bolzman, C. (2016). Les trajectoires éducatives de la seconde génération. Quel déterminisme des filières du secondaire I et comment certains jeunes le surmontent? *Swiss Journal of Sociology*, 42(2), 289–308.
- Gomensoro, A. & Meyer, T. (2017). TREE (Transitions from Education to Employment): A Swiss multi-cohort survey. *Longitudinal and Life Course Studies*, 8(2), 209–224.
- Gomensoro, A., Meyer, T., Hupka-Brunner, S., Jann, B., Müller, B., Oesch, D., Rudin, M., Scharenberg, K. (2017). Employment Situation at Age Thirty. TREE.
- Gordon, M. (1964). *Assimilation in American Life: The Role of Race, Religion, and National Origins*. New York: Oxford University Press.
- Gorodzeisky, A. & Semyonov, M. (2017). Labor force participation, unemployment and occupational attainment among immigrants in West European countries. *PLoS ONE*, 12(5), 1–22.
- Guarin, A. & Rousseaux, E. (2017). Risk factors of labor-market insertion for children of immigrants in Switzerland. In C. Bolzman, L. Bernardi & J.-M. Le Goff (eds.), *Situating Children of Migrants across Borders and Origins* (Vol. 7, pp. 55–75).
- Haeberlin, U., Imdorf, C. & Kronig, W. (2004). *Chancenungleichheit bei der Lehrstellensuche: der Einfluss von Schule, Herkunft und Geschlecht*. Aarau: Schweizerische Koordinationsstelle für Bildungsforschung.
- Heath, A. & Cheung, S. Y. (2007a). The comparative study of ethnic minority disadvantage. *British Academy*, 45, 1–44.
- Heath, A. & Cheung, S. Y. (ed.). (2007b). *Unequal Chances: Ethnic Minorities in Western Labour Markets* (first edition).

- Heath, A., Rothon, C. & Kilpi, E. (2008). The second generation in Western Europe: Education, unemployment, and occupational attainment. *Annual Review of Sociology*, 34(1), 211–235.
- Helbling, L. A. & Sacchi, S. (2014). Scarring effects of early unemployment among young workers with vocational credentials in Switzerland. *Empirical Research in Vocational Education and Training*, 6(1).
- Hupka, S. & Stalder, B. (2004). Jeunes migrantes et migrants à la charnière du secondaire I et du secondaire II. Conférence suisse des déléguées de l'égalité (ed.), *Le genre en vue. Les filles et les jeunes femmes face à la formation: pistes et tendances*. Zurich: Buchs, 87–102.
- Hupka, S. & Stalder, B. (2011). Jeunes migrantes et migrants à la charnière du secondaire I et du secondaire II. In M. M. Bergman, S. Hupka-Brunner, A. Keller, T. Meyer & B. Stalder, *Transitions juvéniles en Suisse. Résultats de l'étude longitudinale TREE*. Basel: TREE.
- Hupka-Brunner, S., Sacchi, S. & Stalder, B. (2011). Social origin and access to upper secondary education in Switzerland: A comparison of company-based apprenticeship and exclusively school-based programmes. In M. M. Bergman, S. Hupka-Brunner, A. Keller, T. Meyer & B. E. Stalder (eds.), *Transitions juvéniles en Suisse. Résultats de l'étude longitudinale TREE* (pp. 157–182). Zurich: Seismo.
- Imdorf, C. (2017). Understanding discrimination in hiring apprentices: How training companies use ethnicity to avoid organisational trouble. *Journal of Vocational Education & Training*, 69(3), 405–423.
- Imdorf, C. & Seiterle, N. (2015). La formation professionnelle dans le cadre des réseaux d'entreprises formatrices comme aide à l'intégration des jeunes issus de l'immigration. In G. Felouzis & G. Goastellec (eds.), *Les inégalités scolaires en Suisse* (pp. 141–160). Bern: Peter Lang.
- Kao, G. & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly*, 76(1), 1–19.
- Kogan, I. (2006). Labor markets and economic incorporation among recent immigrants in Europe. *Social Forces*, 85(2), 697–721.
- Kronig, W. (2007). *Die systematische Zufälligkeit des Bildungserfolgs*. Bern: Haupt.
- Laganà, F., Chevillard, J. & Gauthier, J.-A. (2014). Socio-economic background and early post-compulsory education pathways: A comparison between natives and second-generation immigrants in Switzerland. *European Sociological Review*, 30(1), 18–34.
- Lessard-Phillips, L., Fibbi, R. & Wanner, P. (2012). Assessing the labour market position and its determinants for the second generation. In M. Crul, J. Schneider & F. Lelie (eds.), *The European Second Generation Compared* (pp. 165–224).
- Liebig, T., Kohls, S. & Krause, K. (2012). The Labour Market integration of Immigrants and Their Children in Switzerland (No. 128).

- Liebig, T. & Widmaier, S. (2009). Children of Immigrants in the Labour Market of EU and OECD Countries: An Overview.
- Meyer, T. (2003). Les jeunes d'origine étrangère. In OFS (Éd.), *Parcours vers les formations post-obligatoires: Les deux premières années après l'école obligatoire: Résultats intermédiaires de l'étude longitudinale TREE* (pp. 111–118). Neuchâtel: Office fédéral de la statistique.
- Meyer, T. (2011). On ne prête qu'aux riches: l'inégalité des chances devant le système de formation en Suisse. In M. M. Bergman, S. Hupka-Brunner, A. Keller, T. Meyer & B. Stalder (eds.), *Transitions juvéniles en Suisse. Résultats de l'étude longitudinale TREE*. Zurich: Seismo.
- Meyer, T. (2016a). Bildungsgrenzen im Spiegel der Panel-Studie TREE.
- Meyer, T. (2016b). Les frontières éducatives à la lumière de l'étude longitudinale TREE.
- Meyer, T. (2018). De l'école à l'âge adulte: parcours de formation et d'emploi en Suisse. *Social Change in Switzerland*, 13, 1–13.
- Mueller, T. & Ramirez, J. V. (2009). Wage inequality and segregation between native and immigrant workers in Switzerland: Evidence using matched employee–employer data. *Occupational and Residential Segregation*, 205–243.
- OECD (2009). *OECD Economic Surveys: Switzerland*. OECD.
- OECD (2010). *PISA 2009 Results: Overcoming Social Background*. OECD.
- OECD (2016). *PISA 2015 Results (Volume I): Excellence and Equity in Education*. OECD.
- OECD (2018a). *Catching Up? Country Studies on Intergenerational Mobility and Children of Immigrants*. OECD.
- OECD (2018b). *Education at a Glance 2018: OECD Indicators*. OECD.
- Oesch, D., Lipps, O. & McDonald, P. (2017). The wage penalty for motherhood: Evidence on discrimination from panel data and a survey experiment for Switzerland. *Demographic Research*, 37(56), 1793–1824.
- Park, R. & Burgess, E. (1921). *Introduction to the Science of Sociology*. Chicago: Chicago University Press.
- Piguet, E. (2004). *L'immigration en Suisse. 50 ans d'entreouverture*. Lausanne: Presses polytechniques et universitaires romandes.
- Portes, A. & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Science*, 530, 74–96.
- Raitano, M. & Vona, F. (2015). Measuring the link between intergenerational occupational mobility and earnings: Evidence from eight European countries. *The Journal of Economic Inequality*, 13(1), 83–102.

- Sacchi, S. (2011). Construction of TREE panel weights. Basel, Zurich: TREE.
- Sacchi, S., Kriesi, I. & Buchmann, M. (2016). Occupational mobility chains and the role of job opportunities for upward, lateral and downward mobility in Switzerland. *Research in Social Stratification and Mobility*, 44, 10–21.
- SAKE (2018, 11 October). Bevölkerung nach Migrationsstatus – 2017.
- Samuel, R., Bergman, M. M. & Hupka-Brunner, S. (2013). The interplay between educational achievement, occupational success, and well-being. *Social Indicators Research*, 111(1), 75–96.
- Scharenberg, K., Rudin, M., Müller, B., Meyer, T. & Hupka-Brunner, S. (2014). Education pathways from compulsory school to young adulthood: The first ten years.
- Schmid, F. (2016). The gender wage gap in Switzerland over time. *Swiss Journal of Sociology*, 42(3), 442–467.
- SECO (2018). Arbeitslosigkeit in der Schweiz 2017. Bern: SECO.
- SKBF (2014). Swiss education report 2014. Aarau: SKBF.
- Spörlein, C. (2018). How educational systems structure ethnic inequality among young labour market participants in Europe: Occupational placement and variation in the occupational status distribution. *Research in Social Stratification and Mobility*, 55, 109–119.
- Stalder, B. & Nägele, C. (2011). Vocational education and training in Switzerland: Organisation, development and challenges for the future. In M. M. Bergman, S. Hupka-Brunner, A. Keller, T. Meyer & B. Stalder (eds.), *Youth Transitions in Switzerland. Results from the TREE Panel Study* (pp. 18–39). Zurich: Seismo.
- Steiner, I. & Wanner, P. (eds.). (2019). *Migrants and Expats: The Swiss Migration and Mobility Nexus*. New York, NY: Springer Berlin Heidelberg.
- Thijssen, L. & Wolbers, M. H. J. (2016). Determinants of intergenerational downward mobility in the Netherlands. *Social Indicators Research*, 128(3), 995–1010.
- Wanner, P. & Fibbi, R. (2009). Enfants d’immigrés en Suisse Entre intégration et discrimination. In M. Oris, E. Widmer, A. de Ribaupierre, D. Joye, D. Spini, G. Labouvie-Vief & J.-M. Falter (eds.), *Transitions dans les parcours de vie et construction des inégalités* (pp. 127–147). Lausanne: Presses polytechniques et universitaires romandes.
- Zimmermann, B. & Seiler, S. (2019). Do educational pathways moderate the effects of social origin and gender on occupational outcomes? TREE Working Paper.
- Zschirnt, E. & Fibbi, R. (2019). Do Swiss Citizens of Immigrant Origin Face Hiring Discrimination in the Labour Market? Working Paper #20. Neuchâtel: NCCR “On the Move”.